OCRWM IT Capital Investment Planning
FY2001 Data Call Guidance

Introduction

OCRWM is preparing to forward a Fiscal Year 2001 budget submission to the Office of Management and Budget (OMB). As part of this effort, OCRWM must submit an input to the DOE Chief Information Officer that's compliant with the IT Capital Planning guidance of OMB, DOE, OCRWM, Clinger-Cohen, and GPRA. Of particular importance is the Clinger-Cohen Act of 1996 which requires the integration of budget, financial, and program management processes to maximize the value and manage the risk of information technology (IT) investments. Therefore, it is required that all OCRWM IT Initiatives planned for FY2001 follow the planning process and data submission format established by the Office of Information Management (OIM). Program Managers shall provide their input to OIM any time prior to July 19, 2000, using this guidance and the accompanying electronic work sheet found at this location.

Though this data call is aimed primarily at meeting OMB's budget submission requirements, you'll notice that the information we're gathering can be used to support other efforts, including:

- Formalization of an annual IT capital planning process centered on the future use of automated support tools such as the Information Technology Investment Portfolio System (I-TIPS).
- Development of an OCRWM enterprise architecture (current and future) and related system/data standards.
- Identification of effective and compliant program performance measures.
- An improvement in management practices that move us toward a "gather-once/use-many" approach to data calls and program reviews.

Your support for this effort is greatly appreciated, as well as any feedback regarding the OCRWM IT Capital Planning Process that you may have.

Attachment 1 – Overview

Purpose of Data Call

(1) Support the DOE CIO in meeting OMB FY01 requirements for information technology budget inputs. (2) Meet DOE policy and legislative mandates for agency IT Capital Planning. (3) Formalize the OCRWM IT Capital Planning Process. (4) Support the ongoing development of an OCRWM enterprise IT architecture and related system/data standards.

Authority and References

U.S. Department of Energy Guide to IT Capital Planning and Investment (September 1999). A copy is available in .pdf format at: http://www-it.hr.doe.gov/implan/guider~1.pdf

U.S. Department of Energy, Office of Civilian Radioactive Waste Management, Information Management Steering Committee. Draft IT Investment Management Baseline and Recommendations Report (March 1999).

U.S. Department of Energy, Office of Civilian Radioactive Waste Management. Information Management Multi-Year Program Plan: FY 2000-2004 (September 1999).

OMB Circular No. A-11 (Revised July 12, 1999). Part 1: Preparation and Submission of Budget Estimates, Section 53 – Information Technology (pgs.111-123). Available in .pdf format at: www.whitehouse.gov/omb/circulars/a11/99toc.html

Clinger-Cohen Act of 1996 (formerly the Information Technology Management Reform Act, contained in the National Defense Authorization Act for Fiscal Year 1996, P.L. 104-106, Division E. 40 USC 1401). Section 5122: Capital Planning & Investment Control. The Act is available at: www.itpolicy.gsa.gov/mke/capplan/s1124_en.htm

Paperwork Reduction Act of 1995 (P.L. 104-13. 44 USC 3501). Section 3506: Federal Agency Responsibilities. A copy of PRA '95 is available at: www.rdc.noaa.gov/~pra/pralaw.htm

Government Performance Results Act of 1993 (P.L. 103-62. 31 USC 1115). Section 3: Strategic Planning (See OMB A-11 Part 2 for guidance). Section 4: Annual Performance Plans and Reports (See OMB A-11 Part 3 for guidance). Available at: www.whitehouse.gov/OMB/mgmt-gpra/gplaw2m.html

OCRWM IT Capital Investment Planning Schedule

OIM Conducts Initial Screening/Evaluation of FY01 IT Initiative Portfolios Received	5/23 – 6/6
YMSCO Issues Final FY01 Planning Guidance	6/6
OIM Provides Screening/Evaluation Results	6/7
All Final FY01 Initiatives are Submitted to OCRWM OIM	**7/19**
OIM conducts final screening/evaluation of FY01 Initiatives	7/19-7/26
FY01 Work Plan to PORB for Review	7/27 – 8/7
OCRWM OIM Conducts IRB	7/27 – 8/17
OCRWM OIM CIO Provides Recommendation to PORB	8/18
PORB Approves Plan	8/21 – 8/22
YMP FY01 Plan Update	8/22

Attachment 2 – Background/Summary of Process

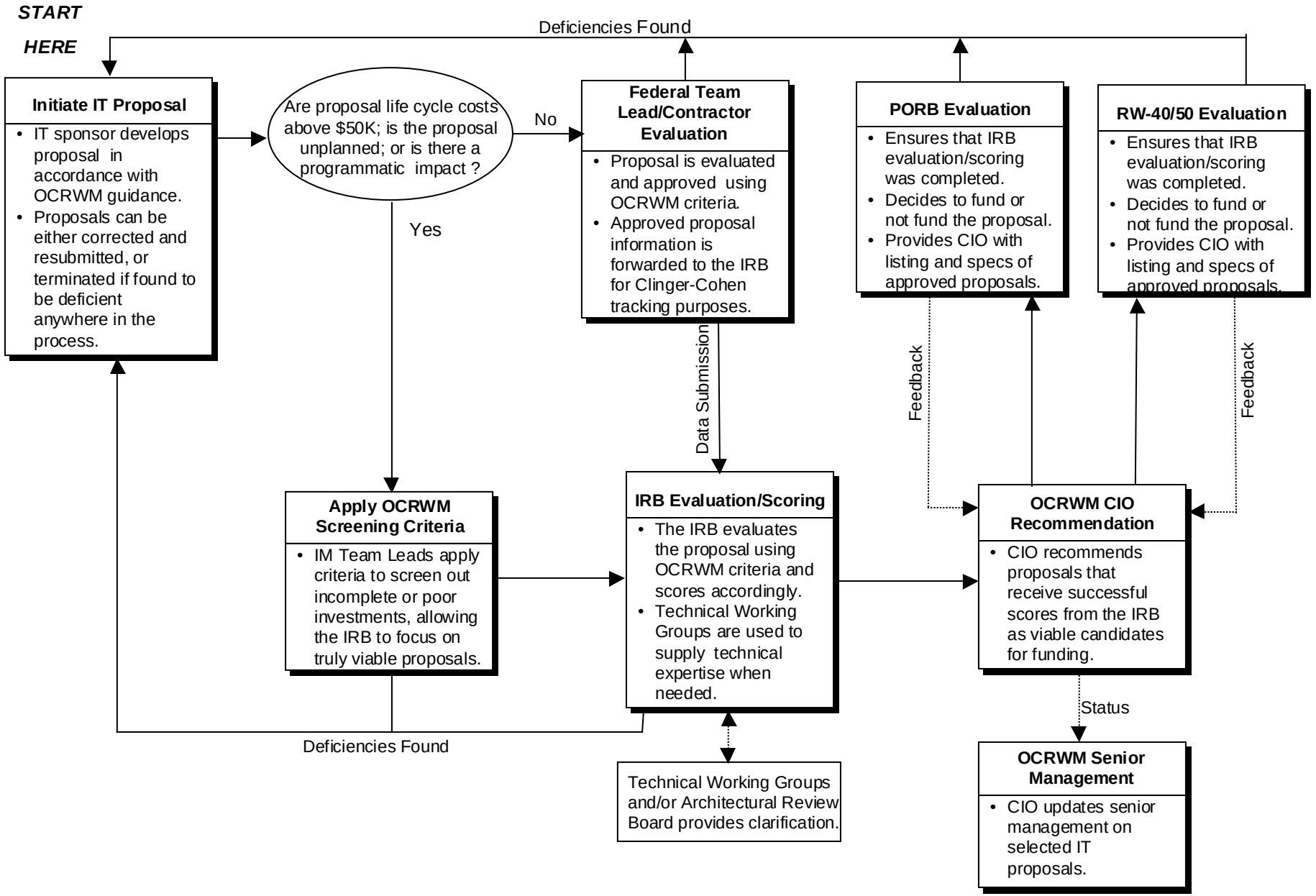
The Clinger-Cohen Act of 1996 (CCA) is intended to improve IT management across the federal government. It requires agency heads to implement an approach that *maximizes the value* and *manages the risk* of information technology (IT) investments. The CCA proposes a more rigorous and disciplined approach to IT investment, which is to be integrated within the agency's budget, financial, and program management processes. Both the Office of Management and Budget (OMB) and the General Accounting Office (GAO) are key advocates driving the implementation of CCA processes across the federal government. The OMB provides the appropriate data formats and procedures (OMB Circular A-11, Part 1, Exhibit 53, page 111) for agencies to utilize when reporting IT investment proposals and associated funding, while the GAO provides recommendations and guidance based on best practices for implementing and managing an effective IT Capital Planning Investment Process (see www.gao.gov).

In an effort to support the Department's responsibility for reporting OMB Circular A-11, Exhibit 53 information, and lay the groundwork for successful IT Capital Investment Planning throughout OCRWM as required by the CCA, the OCRWM OIM is requiring completion of the attached data worksheet to document and justify the feasibility of IT initiatives requested for FY01.

The OIM goal is to meet OCRWM IT target funding in a fair and collaborative manner that is consistent with the OCRWM Draft IT Capital Planning and IT portfolio development process. This newly designed process (see Attachment 3) is based on the requirements of the CCA to allow appropriate evaluation of investment proposals against established Departmental IT investment requirements, program needs and priorities, and best-practice metrics in the areas of technical feasibility, cost, risk management, and strategic planning.

The level of information required for proposals, as well as their subsequent evaluation, is dependent on the potential cost, impact, and complexity of the proposed IT initiative (see Attachment 4). All proposed investments will be captured and tracked by the IT Capital Investment Planning Process. Proposed initiatives which cost $50,000 or more, and/or activate established program impact thresholds (see attachment 4), will undergo a standardized evaluation and scoring process to assess their technical feasibility and potential success as investments. The OCRWM criteria to be used for this evaluation will be based on Departmental criteria currently listed in the DOE Guide to IT Capital Planning and Investment (September 1999). Initiative evaluation will be conducted by the OCRWM Investment Review Board (IRB) and the applicable Technical Working Groups (TWGs) available to the board for technical review and analysis. After evaluation by the IRB, selected proposals will be recommended to the Project Office Review Board (PORB) or RW 40/50 for funding and implementation. IT proposals under $50,000 that do not pose a programmatic impact will be evaluated/scored by the OIM Federal Team Lead and/or OIM Contractor Lead most familiar with the proposal and its implications. Approved proposals will be forwarded to the IRB for tracking purposes.

ATTACHMENT 3 – OCRWM IT Capital Investment Planning Process



ATTACHMENT 4 – Input Guidance

Initiative Proposal Instructions and Overview.

Fiscal Year 2001 IT program proposals are to be submitted by the initiative sponsor using the electronic OCRWM IT Capital Planning Work Sheet which accompanies this guidance. A completed example of the work sheet (using fictitious data) is provided in Attachment 6. The level of detail necessary in initiative proposals will be dependent on the level of cost and/or program impact estimated. As a result, expensive or high-impact initiatives will require significant detail, while less expensive, low-impact initiatives can use a more succinct proposal. Each contractor should ensure that appropriate internal reviews and processing are performed before forwarding above-threshold proposals to the IRB. All out-of-plan IT proposals which arise after the normal planning cycle are required to undergo the same work sheet and evaluation process. Once the proposal is completed, contractors will forward the electronic worksheet and any related electronic files to OCRWM OIM through their appropriate internal processes, while federal staff will forward files via the appropriate IM Team Lead for their location.

The OCRWM IT Capital Planning Work Sheet contains the following elements from OMB A-11/Exhibit 53, the DOE Guide to IT Capital Planning and Investment (September 1999), and established best practices for IT Capital Investment Planning (definitions are provided in Attachment 5).

Required Information For All IT Initiatives:

- Initiative Name
- Work Package Number
- Identification Number
- Initiative Overview
- Expected Outcome
- Critical Path Relationship (s) with Associated IT Initiative (s)
- Expected Beneficiaries
- Functional Description/Justification of Need
- Core Mission/Business Areas to be Addressed
- Schedule Data
- Alignment with Information Architecture
- Organization
- Points-of-Contact
- Financial Data-Expected Lifecycle Costs
- Acquisition Strategy-Proposed Funding Source(s)
- IT Resources Needed
- Use Of COTS/NDI
- Expected Risks
- Records Implications/Requirements
- Security Implications
- Quality Affecting Elements

Additional Information Required for IT Initiatives With Lifecycle Costs Greater Than $50,000:

- Status of Work Process Reengineering
- Expected Return On Investment (ROI)
- Assessment of Private Sector Alternatives
- Concept of Operations
- High-Level Architectural Profile
- Key Milestones
- Definition of Performance Measures

Program Impact Thresholds:

If proposed initiatives involves or affects one or more of the categories listed below, CIO approval and activation of the IRB process is warranted to assess impact to the Program.

- Interoperability Systems
- Cross-cutting Systems
- Infrastructure
- New Technology Initiatives
- High Visibility/Sensitive Initiatives
- YMP Mission, Priorities, or Goals
- Regulatory Requirements
- Established Standards or Procedures

ATTACHMENT 5 – Definitions

Information Technology – any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display switching, interchange, transmission, or reception of data or information.

Information System – means a discrete set of information technology, data, and related resources, such as personnel, hardware, software, and associated information technology services organized for the collection, processing, maintenance, use, sharing, dissemination or disposition of information.

Financial Management System – financial systems and financial portions of mixed systems necessary to support financial management.

Major IT System – a system that requires special management attention because of its importance to Program mission; its high development, operating, or maintenance costs; or its significant role in the administration of agency programs, finances, property, or other resources. For the financial management mission area, "major" is any IT system that rounds to $1 million (costing more than $500,000).

Development/Modernization/Enhancement – Program cost for new systems, changes, or modifications to existing systems that improve capability or performance, changes mandated by Congress or agency leadership, personnel costs for project management, and direct support.

Steady State – maintenance and operations costs at current capability and performance level including costs for personnel, maintenance of existing information systems, corrective software maintenance, voice and data communications maintenance, and replacement of broken IT equipment.

Funding Source – the direct appropriation of other specific budget authority agency receives to pay for a particular project or service.

IT Infrastructure and Office Automation – IT investments that are common user systems, communications, and computing infrastructure. These investments usually support multiple mission areas and might include general LAN/WAN, desktops, data centers, and telecommunications.

IT Architecture and Planning – IT investments that support strategic management of IT operations such as Business Process Redesign, IT architecture development, IT investment planning, procurement management, and IT policy development and implementation.

Alignment with Program Information Architecture – IT initiative being proposed is consistent with standard applications and technology used to manage data to meet the Program's business needs. Adhering to the Program's IT architecture and standards reduces technical integration risk.

Use of Commercial Off The Shelf (COTS)/Non-Developmental Items (NDI) - New development is typically a major source of risk, therefore, initiatives based on COTS/NDI solutions are desirable. The more a solution can be fit to an existing COTS/NDI product, without betraying requirements, the less development risk will be introduced; however, mixing COTS/NDI products from a range of vendors can introduce its own risk.

Quality Affecting Elements – The initiative will, or potentially can involve the specification, preparation, and maintenance of quality assurance records as defined in DOE/RW-0333P, Quality Assurance Requirements and Description (QARD), Section 17.0.

Concept of Operations – A description of the initiative's overall operation, functionality, and interfaces. What are the functions of the proposed initiative? How will the initiative interface with related system? What software/hardware standards are proposed?

High-Level Architectural Profile – A framework and description of the enterprise, integrated IT, and business environment. Block diagram and narrative of the major system functions and flow of information between system components, as well as relationships to existing systems (i.e., feeds to and from existing systems).

Attachment 6 – Example Electronic Worksheet

Please note that the data in this worksheet is purely for instructional purposes.

OCRWM IT Capital Investment Planning Work Sheet FY2001 Data Call

NOTE: Shaded areas to be completed by/or in conjunction with OIM representative.

REQUIRED INFORMATION FOR ALL IT INITIATIVES

Initiative Name

Information Architecture/TIMS

Work Package Number	Identification Number
15012161M3 15012161M1	TRWW-01-019

Initiative Overview

Choose Type and Provide Brief Description

☐ Steady State

☒ Development-Modernization Enhancement Design, develop and implement an OCRWM-wide, mission-driven integrated database and workflow automation. Reduce or eliminate redundant data entry and storage. Reduce system and data administration. Improve process controls and reduce errors and rework. Provide sound IT foundation for Site Recommendation, Licensing and Site O&M.

IT Initiative Type

☒ Discrete Task ☐ PM&I Task ☐ LOE Task ☐ PM&I/LOE

Expected Outcome

Describe: Improved workflow automation, less manual interfacing, data entry and checking will result in reduced administration, reduced errors and inconsistent data.

Justification of Need

Describe: There are various factors that support the justification of this initiative. 1) Enables diverse groups to collaborate efforts, improves interfaces 2) Improved data organization and labeling is needed to support the entire repository program life-cycle.

Is this Initiative Required to Successfully Complete an Associated IT Initiative?

☒ Yes - Describe: All subsequent IT initiatives.

☐ No

Describe Expected Beneficiaries

Choose Type(s) and Provide Brief Description(s) of Benefits

☒Direct Long-range strategic foundation will provide benefits throughout program life-cycle especially in the area of information organization and usability. Significant reduction of errors will provide future cost avoidance.

☐Indirect

Provide the Functional Description

(Also Attach Technical Specifications)

Please see the IT Architecture Baseline (IAB) TO-BE model as previously delivered.

Core Mission/Business Areas to be Addressed

Choose Type and Describe How

☒Direct Support of Mission The development of an integrated information architecture will support all future program objectives once implemented. The design is planned to include Site Recommendation, Licensing, Construction Authorization, Construction and Operations/Maintenance support, with a prioritized implementation to enable 'just-in-time' capabilities.

☐Financial Management

☒Infrastructure/Office Automation This initiative is to develop the Enterprise-Wide Information Infrastructure. This initiative is expected to result in changes in workflow/information processes. While some changes to the IT technical subarchitecture maybe required, they should be minimal.

☒Architecture/Planning Significant changes in technical and administrative database structures are expected. As a result, changes in the Information Architecture baseline will be required.

Schedule Data

Start Date 10/1/00	Required Target Date 9/30/01

Expected Mission Life Data model indefinate, workflow automation 5 years.

Does the Initiative Align With the Program's Information Architecture?

☒ Yes ☐ No

If the Initiative Involves Non-Standard Item(s), Provide Detailed Justification

Organization

Department Title Information Technology Office	Lowest WBS Level 1.2.21.6.1

Points-of-Contact

	Phone↓
Project Sponsor Nicholas CerJanic	702-295-0000
Technical Contact Jake Wooley	702-295-0000
DOE Manager Bob Wells	202-586-0000
Other	

Financial Data For Initiatives Under $50K

Expected Lifecycle Cost Up To Five Years (Dollars)
*All Costs Are Burdened

NOTE: 1) Data For Initiatives Over $50K Is Required Later In This Work Sheet. 2) Hard Returns Will Expand Fields To Include Multiple Fiscal Years.	Fiscal Year	Amount
Software Costs*		
Hardware Costs*		
Total Costs (including previous hardware and software costs)*		
Add "Total Costs" Amounts Above To Determine Expected Lifecycle Costs ⇒		

Acquisition Strategy

Choose Type

☐Lease ☐Lease to Ownership ☐Purchase ☒Purchase and Development

☐Single Source/Limited Competition - (Include Justification/Rationale)

☐Extension of Existing Contract - (Change of Scope of Work Must be Explained and Documented)

If applicable, summarize IT resources to be excessed, replaced, and/or retired.

If applicable, list implications of follow-on acquisitions to the following.

	Description↓
☒Annual Maintenance	Annual maintenance for the the following hardware: Development Servers, Production Servers, Development Workstations. Annual maintenance for the following software: COTS, Software Development Tools and Software Maintenance Licenses.
☐Modification Costs	
☐Other	

Incremental Development or Acquisition? ☒Yes ☐No

Describe: This project requires phased implementation to manage risk.

Proposed Funding Source(s) - B&R Code

IT Resources Needed (Current Year-2001)

Descriptions Provided Must Correspond With "Financial Data" Costs

	IT Specific FTE(s)	**Total FTE(s)**
Maintenance IT resources needed to support maintenance issues such as: repairing errors or bugs in the code, increasing performance of the database to the desired performance levels, and improve user procedures for greater ease of use of the system.	1.5	1.5
Installation Resources needed to install various hardware/software requirements to run the database or install additional hardware/software necessary to implement enhancements.	3.0	3.0
Help Desk Computer help desk resources necessary to provide the user community support or trouble-shooting solutions to issues that may develop throughout the year. The number of resources necessary to support the database may decrease over time.	2.5	2.5
Provide Itemized List(s) And Description(s) Of Hardware and Software - New Purchase development server, production server and development workstations. Also, purchase software packages necessary to develop to database (All Hardware and Software items must be clearly stated for each proposed IT Initiative for FY01)	2.0	2.0
- Enhancement of existing system(s)		
- Expanded use of existing system (s)		
Telecommunications Telecom resources necessary to support the increase in FTP usage and	1.5	1.5

storage requirements.		
Describe remote access requirements, including home office support. NA		

Use of COTS/NDI?

☒Yes ☐No

Describe: Some sub-systems may be COTS, based on make-vs-buy analysis, vendor viability, support, and interoperability and integration issues. Some backbone functionality currently appears to be best implemented as COTS, however further evaluation is needed.

Does the Initiative Have Records Management Implications/Requirements?

☒Yes ☐No

Describe: Some components will be managed IA with the QARD.

Does the Initiative Have Security Implications?

☐Yes ☒No

Describe:

☐Approved Security Plan Attached

☒Computer Protection Program Manager (CPPM) Certification has occurred

☒Initiative is in Compliance with Cyber Security Program Plan (CSPP) as required by the DOE Order 205.1 Unclassified Cyber Security Policy

Does the Initiative Have Any Quality Affecting (QA) Elements

☒Yes ☐No

Describe: QAP 2-0 evaluations must be conducted for all sub-systems.

Additional Information Required for IT Initiatives With Lifecycle Costs Greater Than $50K

Financial Data

Expected Lifecycle Costs Up To Five Years (Dollars)

***All Costs Are Burdened**

NOTE: Hard Returns Will Expand Fields To Include Multiple Fiscal Years.	**Fiscal Year**	**Sponsoring Organization Estimate**	**IT Estimate**	**Total Amount**
Total Labor*	FY01 FY02 FY03	200,000 400,000 270,000	500,000 400,000 270,000	500,000 400,000 270,000
Training*	FY01 FY02	80,000 60,000	150,000 100,000	150,000 100,000
Travel*	FY01 FY02	35,000 30,000	35,000 30,000	35,000 30,000
ODCs*				
Number of FTEs (professional and support)*				
Hardware*	FY01 FY02	250,000 100,000	250,000 100,000	250,000 100,000
Software*	FY01 FY02	450,000 450,000	450,000 450,000	450,000 450,000
Software Engineering*				
Development/Integration*				
Security*				

Facilities (Wiring, LAN, Power, HVAC, etc.)*				
Communication*				
System Analysis and Design*				
Projected Annual Maintenance* Explain:				
Supplies* Explain:				
Total Projected Acquisition Costs*				
Other Costs* Explain:				
Add "Total Amounts" Above To Determine Expected Lifecycle Costs ⇒				2,735,000

Describe Status of Work Process Reengineering

☐Completed

☒Ongoing 18 technical and 4 admin processes completed.

☐Planned

Describe Expected Return On Investment (ROI)

Dollar Amount/Intangibles Significant reduction in errors and rework with associated cost avoidance.

Return Year(s) FY02-FY07

Indicate Expected Risks?

Provide Detailed Description For Each

Cost ☐None ☐Slight ☒Moderate ☐Significant

Describe: Aggressive implementation schedules are expected. Additional IT resources will be needed to work this issue. Unless current work is frozen for existing systems, available IT resources for this initiative could be impacted.

Technical Risk ☐None ☒Slight ☐Moderate ☐Significant

Describe:

Schedule ☐None ☐Slight ☐Moderate ☒Significant

Describe: All software development efforts of this magnitude are complex and highly dependent on timely completion of tasks throughout the organization. The level of teamwork required implies substantial improvements in communication, cooperation and coordination are needed both within the IT element and throughout the organization.

Describe Assessment of Private Sector Alternative

Initiative will require ongoing trade studies during each phase, currently in study with the ARB/Technical Working Groups.

Describe and/or Attach Concept of Operations

Please see IT Architecture Baseline Layers I and II as delivered.

Describe and/or Attach the High-Level Architectural Profile

Based on open architecture, relational Data Model with high bandwidth, 100 feet LAN support and lightweight user clients. See IAB.

Provide Key Milestones

Milestone↓	Level	Due Date	Cost

Analyze and document progress on planned, in progress, and completed tasks.	M5	9/30/01	300,000
Complete operational database testing and document testing results via written report.	M5	10/30/01	175,000

Define Initiative Performance Measures and Projected Dates

Performance Measure↓	Date↓
Complete Design	12/31/00
Complete Test Plan	4/30/01
Complete Phase I Coding	6/30/01
Complete Phase I V&V	7/30/01
Complete Phase 2 Coding	8/30/01
Complete Phase 2 V&V	9/30/01

Sign-Off's

Functional Manager - Signature & Review/Approval Date

ARB - Review/Comments

OCRWM IRB - Review/Comments